

Department of Biology: Diverse and Forward-Looking

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Abstract

The Purdue School of Science Biology Department at IUPUI is a diverse department representing many different biological disciplines, including regenerative, developmental and cellular biology, biochemistry, immunology, microbiology, plant biology, and ecology. Through a collaborative effort, the biology graduate students have organized a poster representation of their thesis work to highlight different cutting edge research efforts in our department. Medically relevant research is emphasized including prominent diseases and disorders such as cystic fibrosis, diabetic hypertension, polycystic kidney disease, congestive heart failure, osteoporosis, cancers, fetal alcohol syndrome, Down syndrome, lung cancer, Meckel-Gruber syndrome and neural disorders. Furthermore, IUPUI Department of Biology partners with the Center of Regenerative Biology and Medicine through which several biology principle investigators have co-appointments. The main objective of this center is to translate basic research findings into regenerative medicine therapies with a focus on the central nervous system, musculoskeletal system, liver, pancreas and appendages. The Urban Center for Stem Education is another initiative that the Department of Biology supports. This is a joint effort with the School of Education and School of Engineering and Technology to foster collaboration to expand knowledge in the STEM areas in an effort to promote teaching and learning between the university and K-12 teachers. This center plays a role in preparing the next generation of K-12 math and science teachers. In an effort to assist in undergraduate education, biology graduate students regularly assist in the mentoring of undergraduate researchers. Finally, biology graduate students participate in the NSF funded GK-12 fellowship program in which select graduate students spend a year in a K-12 classroom teaching science side by side with a K-12 teacher and introducing graduate level research to middle school and high school students through specialized projects designed by the graduate student fellow. As demonstrated, the IUPUI Department of Biology research endeavors are progressive and extensive. In conjunction through collaborative efforts with the medical school and teaching oriented programs, the Department of Biology is forward-looking and community oriented.